

80V/97-58-9-3/13

AUTHORS: Fridkin, A.Ya., Korotkov, P.A., Belobrov, I.K. and
Klevtsov, Y.A., Engineers

TITLE: Pre-cast Pre-stressed Reinforced Concrete Beams Serving
as Support to Bridge Cranes (Sbornyye zhelezobetonnyye
predvaritel'no napryazhennyye podkranovyye balki)

PERIODICAL: Beton i Zhelezobeton, 1958, nr 9, pp 329 - 336 (USSR)

ABSTRACT: The most effective type of beam for supporting bridge
cranes, as far as economy of concrete and steel are
concerned, is the one that is continuously reinforced.
This continuous reinforcing method requires special
machinery and equipment. Consumption of concrete and
steel in beams reinforced with rods is much higher than
those with continuous or batch reinforcement. Beams
with rod reinforcement are economical only when heavy
cranes are used and reinforcement type 30KhG28. It is not
so economical to use rod reinforcement in beams of 12 m
span when compared with similar beams reinforced with
batch reinforcement. Leningrad Promstroyproyekt, in
conjunction with NIIZhB, is working on a project for
pre-stressed reinforced concrete beams 6 and 12 m long,
designed to carry cranes with capacity of up to 50 tons.

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**Pre-cast Pre-stressed Reinforced Concrete Beams Serving as
Support to Bridge Cranes**

Figure 1 illustrates beams with rod reinforcement of standard profile and steel Mark 25G2S. The reinforcement is tensioned to 2.5% of its length, not less than

4 700 kg/cm²; limit of elasticity is 5 000 kg/cm².

Table 1 shows typical cross-sections of 6 and 12 m rod reinforced beams and gives respective technical data.

Table 2 shows typical cross-sections of 6 and 12 m batch reinforced beams and gives respective technical data.

The NIIZhB carried out tests with both rod and batch reinforcement of these beams. In the case of beams with batch reinforcement, special anchoring washers were used which were not welded to rods and it was necessary to ascertain the anchoring properties of the reinforcement in the concrete when these washers were omitted. Tests were carried out by Engineer I.K. Belobrov and

Candidates of Technical Sciences S.A. Dmitriyev and N.M. Mulin in a laboratory that specialises in the theory of reinforced concrete and reinforcement (Head: Professor A.A. Gvozdev). Figure 3 illustrates horizontal cracks at the end of the beam. The effect of these cracks on

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the collapse of the end of the beam under testing

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conditions is described. To prevent the formation of the horizontal cracks at the end of the beams, part of the cross reinforcement at the end was pre-stressed in order to compress the concrete in this part of the beam. Tensioning was 1/6th of the value used for longitudinal reinforcement. No horizontal cracks appeared after this (Figure 4). Illustration of the method and the machines used for the investigation of pre-stressing of beams 6 and 12 m long is given in Figure 5. Figure 6: graph of deflections of crane-carrying beams (PN6-1, PN6-2 and PN6-3) with pre-stressed reinforcement and beam PO6-1 reinforced without pre-stressing. It shows that pre-stressed reinforced beams are twice as strong and crack formations are only one-fourth. The casting of beams 12 m long was made possible by the construction of a machine DN-7. Figure 7 shows the continuous reinforcement of the beam. The concrete used has strength of 400 kg/cm^2 and the reinforcement is of hightensile wires of 3 - 4 mm diameter. Figure 8 shows the method of winding continuous reinforcement and casting two beams. A method

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of this continuous reinforcing of crane-carrying beams was developed by Candidate of Technical Sciences G.I. Berdichevskiy, and testing of beams was carried out by Engineer V.A. Klevtsov in the laboratory of NIIZhB. Figure 10 gives deformation graph of concrete units of the beam in the middle of its span. Tests show that the strength of the beam is considerable; its deflection was 3.2 - 3.6 mm which is 1/1 800 to 1/1 600 of the span. Table 3 gives values of beams carrying cranes of 30-ton capacity. These values show that the most economical type of reinforcement is the continuous reinforcement of these beams. The Leningrad Promstroyproyekt designed open-lattice type of crane-carrying beam from pre-stressed reinforced concrete (Figure 11). There are 11 figures and 3 tables.

Card 4/4

ULITSKIY, B.Ye., doktor tekhn.nauk; KLEVTSOV, V.A., inzh.

Torsion analysis of prestressed reinforced concrete crane
girders. Bat. 1 shel.-bat. no.4:165-169 Ap '59.

(MIRA 12:6)

(Cranes, derricks, etc.)
(Girders)

KLEVTSOV, V. A., Cand Tech Sci -- (diss) "Research on the work and technology of manufacturing prefabricated, reinforced concrete, continuously reinforced, pre-stressed crane booms." Moscow, 1960, 18 pages; (Ministry of Higher and specialized Secondary Education RSFSR, Moscow Automobile and Road Institute); 160 copies; price not given. (KL, 50-60, 133)

BERDICHEVSKIY, G. I., kand. tekhn. nauk, KLEVTSOV, V. A., inzh.
APPROVED FOR RELEASE: 06/19/2000

Testing prestressed concrete crane beams with continuous reinforcements. Trudy NIIEEB no. 14:47-125 '60. (MIRA 13:10)
(Cranes, derricks, etc.) (Girders--Testing)

BERDICHEVSKIY, G.I., kand.tekhn.nauk; KLEVTSOV, V.A., inzh.

Study of prestressed continuously reinforced crane beams of
12-meter span, manufactured on stands with the use of DM-7
machines. Trudy NIIZHB no.24:128-144 '61. (MIRA 15:5)
(Beams and girders)

KLEVTSOV, V.A.

FRENKEL, I.M., kand. tekhn. nauk; MIRONOV, S.A., doktor tekhn. nauk, prof.; BARANOV, A.T., kand. tekhn. nauk; IUZHEVICH, G.A., kand. tekhn. nauk; MIKHAYLOV, K.V., kand. tekhn. nauk; MULIN, N.M., kand. tekhn. nauk; KHAYDUKOV, G.K., kand. tekhn. nauk; KORNEV, N.A., kand. tekhn. nauk; TESLER, P.A., kand. tekhn. nauk; BERNICHEVSKIY, G.I., kand. tekhn. nauk; VASIL'YEV, A.P., kand. tekhn. nauk; LYUDKOVSKIY, I.G., kand. tekhn. nauk; SVETOV, A.A., kand. tekhn. nauk; CHINENKOV, Yu.V., kand. tekhn. nauk; BELOBROVYY, K., inzh.; KLEVTSOV, V.A., inzh.; DOBROMYSLOV, N.S., arkh.; DESOV, A.Ye., doktor tekhn. nauk, prof.; LITVER, S.L., kand. tekhn. nauk; PISHCHIK, M.A., inzh.; SKLYAR, B.L., inzh.; POPOV, A.P., kand. tekhn. nauk; NEKRASOV, K.D., doktor tekhn. nauk, prof.; MILOVANOV, A.F., kand. tekhn. nauk; TAL', K.E., kand. tekhn. nauk; KALATUROV, B.A., kand. tekhn. nauk; KARTASHOV, K.N., red.; MAKARICHEV, V.V., kand. tekhn. nauk, red.; YAKUSHEV, A.A., inzh., nauchnyy red.; BEGA, B.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Reinforced concrete products; present state and prospects for development] Zhелеzobetonnye konstruktsii; sostoyaniye i perspektivy razvitiya. Pod obshchei red. K.N.Kartashova i V.V.Makaricheva. Moskva, Gosstroizdat, 1962. 279 p.

(MIRA 15:8)

(Continued on next card)

FRENKEL', I.M.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Kartashev). 3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov). 4. Gosudarstvennyy institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy (for Berdichevskiy, Vasil'yev, Lyudkovskiy, Svetov, Chinenkov, Belobrovyy, Klevtsov, Dobromyslov). 4. Vsesoyuznyy gosudarstvennyy projektno-konstruktorskiy institut (for Desov, Litver, Pishchik).

(Precast concrete)

KLEVTSOV, V.A.; SMIRNIN, R.G.

Results of testing standard prestressed girders with parallel
booms. Prom. stroi. 42 no.9:20-24 3 '64. (MIRA 17:10)

KLEVTSOV, V.A., kand.tekhn.nauk; MATVEYEV, K.M., inzh.; SUKHAREV, Yu.N., inzh.;
GELLERTOV, G.N., inzh.; MART'YANOV, B.Ya., inzh.

Secondary trusses with strand reinforcement in the lower chord.
Prom.stroi. 42 no.2124-28 '65.

(MIRA 18:4)

NAUMENKO, A.I.; KLEVTSOV, V.I.

The effect of ACTH and cortisone on the tone of cerebral vessels. Farm. i toks. 25 no.6:716-720 M-D '62.

(MIRA 17:8)

1. Nauchno-issledovatel'skaya laboratoriya (zav. - doktor med. nauk S.I. Yakovlev) i Leningradskogo meditsinskogo instituta imeni akademika I.P. Pavlova.

NEIKOVA-BOCHEVA, El. KLEVTSOV, Vl.

Efficiency of the cooled Nitrofoska fertiliser. Izv Inst
"Nikola Pushkarov" 6:175-178 '63.

LEHAYEV, V.A.; KLEVTSOV, Ye.I.

Conditions governing the datolite mineralization in one of the
iron-ore deposits. Trudy Inst. geol. UZAN SSSR No.70:111-119
'65. (MIRA 18:12)

COMBERG, A.M.; KLEVTSOV, Yu.V.

Automatic device for maintaining a given temperature in the
cooling system during stand testing of engines. Avt.prom. 27
no.11:45 N '61. (MIRA 14:10)

1. Ural'skiy avtozavod imeni Stalina.
(Thermostat)

VERKLOVSKAYA, M.M.; IVANOVA, Z.P.; KLEVTSOVA, A.A.

Buried diabases in the Volga-Ural region. Izv.AN SSSR.Ser.geol. 25
no.8:37-57 AG '50. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva.
(Volga-Ural region--Diabase)

IVANOVA, Z.P.; KLEVTSOVA, A.A.; VESKLOVSKAYA, M.M.

Stratigraphy of Bavy sediments in the Volga-Ural region.
Trudy VNIOMI no. 19:7-23 '59. (MIRA 13:12)
(Volga-Ural region--Geology, Stratigraphic)

IVANOVA, Z.F.; KLEYISOVA, A.A.

Pre-Devonian stratigraphy and facies in the Volga-Ural region.
Trudy VNIIGI no.22:94-100 '59. (MIRA 13:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy
institut.
(Volga-Ural region--Geology, Stratigraphic)

3 (5)

AUTHORS:

Ivanova, Z. P., Veselovskaya, M. M., SOV/20-128-4-45/65
Klevtsova, A. A.

TITLE:

On the Stratigraphic Subdivision and the Formation Stages of
Pre-Devonian Deposits in the Central and Eastern Regions of
the Russian Platform

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4, pp 800 - 803
(USSR)

ABSTRACT:

The above deposits became interesting since petroleum was found
in them. They contain Upper Proterozoic and Lower Cambrian
formations in the sedimentary cover of the part of the plat-
form mentioned above. More recent sediments: Upper Cambrian
and Ordovician occur in the central regions of the platform
and strike in a northwesterly direction. Only the two older
ones (more than 3000 m thick) are discussed in the present
paper. Quartzite sandstones (analogues of the Shokshinskiye)
are the oldest of the platform formations investigated here.
They rest directly upon the basement in Yulovo-Ishim and
Yelshanka. They were identified by the authors as the Yulovo-
Ishinskaya suite of "Iotnium". The deposits known as "Nizhne-
Bavliniskiye" in the east, as Kaverinskaya and Serdobskaya

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Stages of Pre-Devonian Deposits in the Central and
Eastern Regions of the Russian Platform

SCV/20-128-4-15/65

series in the central part lie stratigraphically higher above a disconformity and an angular unconformity (Refs 5,8). In the Nizhne-Bavliniskiye deposits the Kaltasinskaya- (316 m thick) and Serafimovskaya suites (450 m thick) and their time equivalent, the Serdobskaya series, are divided into lower and upper strata corresponding to the sedimentation half-cycles. In several cross sections the above suites are intruded by gabbro and diabase. Figure 1 shows the occurrence of the suites mentioned. A thick (more than 700 m) sandstone body classified by the authors as the Leonidovskaya suite (Ref 2) rests upon the Serafimovskaya suite. The Riffian formations are progressively overlain by Lower Cambrian sediments with an angular unconformity and a stratigraphic disconformity. This body is most probably synchronous with the Volynskiy (volcanogenic) complex of the western part of the platform (according to Ye. P. Bruns, Ref 1). The Lower Cambrian (Vorkhne-Bavliniskiye) deposits in the eastern regions of the platform consist of 2 complete sedimentation cycles. Table 1 gives a stratigraphic section of the pre-Devonian deposits. The authors identified

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several time units in the latter according to the stratification peculiarities of the old platform sediments: (1) Yulov-Ishinskaya suite of "Iotnium". (2) Riffian deposits, and (3) Lower Cambrian with decreasing angles of inclination (up to 30° , $10-17^{\circ}$, $0-9^{\circ}$, respectively). The rocks of individual structural stages belong to different zones with respect to the degree of deformation (Refs 4,6). Figure 2 shows the microphotographies of the rocks of the "Iotnium" age, figure 3 those of the Riffian age. There are 2 figures, 1 table, and 8 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut (All-Union Scientific Research Institute of Geological Petroleum Prospecting)

PRESENTED: May 27, 1959, by N. M. Strakhov, Academician

SUBMITTED: January 25, 1959
Card 3/3

VESHLOVSKAYA, N.M.; IVANOVA, Z.P.; KLEVTSOVA, A.A.

Stages in the formation of Pre-Devonian sedimentary strata of the Russian Platform and their age. Dokl. AN SSSR 134 no.6:1410-1413
O '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanyy institut. Predstavleno akademikom N.M.Strakhovym.
(Russian Platform--Geology, Stratigraphic)

KLEVTSCVA, A.A.; SOLCINTSOV, L.F.

Age of the oldest sedimentary cover of the Russian Platform.
Dokl. AN SSSR 139 no.3:673-676 J1 '61. (MIRA 14:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut i Geologicheskii institut Kaznaskogo filiala
AN SSSR. Predstavleno akademikom N.M. Strakhovym.
(Russian Platform--Geology, Stratigraphic)

KLEPISOVA, A.A.; SOLONTSOV, L.F.

Stratigraphic characteristics and correlation of ancient sediments
of the mantle of the Russian Platform. Izv.Kazan.fil. AN SSSR.
Ser.geol.nauk no.9:241-248 '60. (MIRA 15:12)
(Russian Platform—Geology, Stratigraphic)

KLEVTSOVA, L.A.; OSIPOVSKIY, M.I.

Bathynetic structure and the prospects for finding gas and oil
in the heavy sediments of the Upper Kara Depression. Geol.
refl. 1 part 8 no. 3:10-13 Apr '64. (MGPA 17:6)

2. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut, Moskva.

KLEVTSOVA, A.A.

Oil and gas potentials of Early sediments in the Perm-Bashkir arch.
Trudy VNIGNI no.36:83-90 '63. (MIRA 17:9)

KLEVTSOYA, A.A.; KUTUKOV, A.V.; UDOVICHENKO, E.M.

Stratigraphy and oil potential of Pre-Middle Devonian sediments
in Perm Province and the Udmurt A.S.S.R. Izv. vys. ucheb.
zav.; geol. i razv. 8 no.9:21-27 S '65. (MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy
neftyanoy institut.

VAYNSHTEYN, B.P.; KRUGLIKOV, V.Ya.; RAPOPORT, I.B.; VASIL'YEVA, Z.A.;
KAGAN, L.Kh.; PLOKHINSKAYA, Ye.A.; VOLYNSKIY, A.V.; MUZOVSKIY,
V.V.; KLEVISOVA, V.P.; Prinsipali uchastiye: MICHAN, A.I.;
KONOVAL'CHIKOV, L.D.; AYNHTEYN, V.G.; KVASHA, V.B.; CHELYANOVA,
D.P.; ZAYTSEVA, A.F.; ANDREYEVA, T.A.

New way to synthesize oxygen compounds from carbon monoxide
and hydrogen over iron-copper catalysts. Trudy VNI NP no.
9:177-196 '63. (MIRA 17:6)

GLAVINSKAYA, T. A.; DOBROTINA, N. A.; GRUBE, S. B.; KLEVTSOVA, G. I.

Characteristics of protein metabolism and the reactivity of the body in lupus erythematosus. Vest. dermat. i ven. no. 4:8-14 '62.

1. Iz Gor'kovskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta (dir. - kandidat meditsinskikh nauk O. D. Kochura, nauchnyy konsul'tant - sasluzhennyy deyatel' nauki prof. M. P. Batunin) i kafedry kozhnykh i venericheskikh bolezney (sav. - sasluzhennyy deyatel' nauki prof. M. P. Batunin) Gor'kovskogo meditsinskogo instituta imeni S. M. Kirova.

(PROTEIN METABOLISM) (LUPUS ERYTHEMATOSUS)

KLIEVTSOVA [C.B.]

25992

Rol' myeditsin skoy syestry v profilaktikye zhyeludoch-no-kishyechnykh esbolyevaniy
v yaslyakh, myed. Syestra, 1949, No. 7, c. 22-25.

So: Letopis' No. 34

KLEVTSOVA, L. B.

20138 KLEVTSOVA, L. B. Antitoksicheskaya funktsiya pecheni pri rake sheyki matki.
Vracheb. delo., 1949, No. 6, stb. 529-32.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

5(2), 24(3)

AUTHORS:

Kuznetsov, V. A., Zagaynova, L. S. Klevtsova, N. P.,
Shevrina, Z. A. SOV/156-59-2-12/48

TITLE:

The Investigation of Electrocapillary Phenomena on Thallium -
Gold Alloys (Issledovaniye elektrokapillyarnykh yavleniy na
splavakh talliy-soloto)

PERIODICAL:

Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya
tekhnologiya, 1959, Nr 2, pp 268-272 (USSR)

ABSTRACT:

The dependence of the potential maxima of the electrocapillary curves upon the composition of the metal alloys has not yet been clearly fixed. The papers by S. V. Karpachev, A. G. Stromberg and collaborators (Ref 1) with amalgams are mentioned. The present paper deals with the investigation mentioned in the title at 450° and a gold content of the alloy of between 0 and 46% by atom. Thallium was supplied by the Chinkentskiy svintsovo-tsinkovyy zavod (Chinkent Lead- and Zinc Works). A eutectic mixture of lithium- and potassium chloride served as electrolyte. Figure 1 shows the electrocapillary curves for thallium and thallium - gold alloys. They show that the addition of gold leads to an increased surface tension at the boundary alloy - electrolyte. With in-

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creasing gold content the maximum of the electrocapillary curve shifts in positive direction. A. N. Frumkin (Ref 4) explains this shift of the potential of the zero-charge by the fact that the added metal (gold) occupies a certain part of the surface layer. The surface density of thallium and gold are calculated on this basis according to the formula of Gibbs; it is shown by table 1. The adsorption of Au becomes more and more negative with increasing gold content. For the composition of the surface the equation of E. A. Guggenheim and N. K. Adam (Ref 7) was used. Table 2 gives the surface concentration of Tl and Au and the degree of occupation of the surface layer. With increasing gold content in the alloy the degree of occupation of the surface by Au rises and attains 0.28 at a gold content of 45.9% by atom. The approximation character of the calculation - which is carried out on the assumption that the dimensions of the Tl- and Au particles are equal in the surface layer and in the alloy - is regarded as justified by the fact that the deviations of the Tl-Au-alloy from the law of the ideal solution are inconsiderable. This is shown by figure 2. It is, therefore, possible to

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neglect the effect of the mentioned differences. The average value of the potential of the zero charge referred to one electrode of melted lead in a eutectic mixture of LiCl and KCl was found to be equal to -0.28 v. The authors thank Academician A. N. Frumkin for the interest he displayed in their work. There are 2 figures, 2 tables, and 10 references, 9 of which are Soviet.

PRESENTED BY: Kafedra fizicheskoy khimii Ural'skogo gosudarstvennogo universiteta im. A. M. Gor'kogo
(Chair of Physical Chemistry, Ural State University imeni A. M. Gor'kiy)

SUBMITTED: July 22, 1958

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5(4)

AUTHORS:

Kusnetsov, V. A., Aksenov, V. I.,
Klaytsova, M. P.

SOV/20-128-4-35/65

TITLE:

Zero Charge Potentials of Tellurium-Thallium Alloys

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 4,
pp 763-766 (USSR)

ABSTRACT:

The system Te-Tl was chosen because the two components - according to data by S. Karpachev and A. Stromberg (Ref 1) - have very different zero charge potentials facilitating the determination of the dependence of the zero charge potential of an alloy on its composition. The zero charge potentials were determined by investigating the electrocapillary properties of the liquid metals and alloys. The potential of the capillary electrodes was referred to an electrode of fused lead, the experimental temperature was 475°. Figure 1 shows the electrocapillary curves of the two components and their alloys. An addition of Tl (up to 25 atom%) to Te lowers the maxima σ_{\max} of the electrocapillary curves. At a high content of Tl, σ_{\max} increases again. Similar observations were made by A. N. Frumkin and A. V. Gorodetskaya (Ref 4)

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Zero Charge Potentials of Tellurium-Thallium Alloys SOV/20-128-4-35/65

on the electrocapillary curves of Hg and Tl amalgam. They explained this phenomenon by the fact that the field of the electric double layer influences the adsorption of the alloying constituents in the surface film. Figure 2 shows the dependence of the zero charge potential on the composition of the alloy. With an increasing content of Tl, the zero charge potential shifts in the negative direction. According to A. N. Frumkin, this is explained by a varying charge of the Tl adsorbed on the surface film. θ_2 is

determined - the fraction of the surface film occupied by particles of the second component (Tl). From the equation $d\sigma_{\max} = -\Gamma_1 d\mu_1 - \Gamma_2 d\mu_2$ (Γ_1 - Gibbs' surface density of Te, Γ_2 - the same for Tl, μ_1 , μ_2 - chemical potentials for Te and Tl), an equation is derived for $\Gamma_1 = 0$: $\Gamma_2^{(1)} = \frac{d\sigma_{\max}}{d\mu_2}$.

The activity of Tl was determined by measuring the electromotive force of the concentration chain Tl/eutectic mixture LiCl + KCl + 2% by weight of TlCl/alloy Tl-Te. The measurement results are given in table 1. Figure 3 shows the

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dependence of $\Gamma_2^{(1)}$ on the alloy composition. A strong deviation from Raoult's law is ascertained. This suggests that the surface film consists of dipoles and is not monomolecular. Similar phenomena were observed for the Tl amalgam by A. N. Frumkin and N. S. Polyanovskaya (Ref 6). Therefore, the potential shift for mono- and bimolecular layers was computed (Table 2), the assumption of a bimolecular layer showing a better agreement with the experimental data. The computation of Θ_2 confirms the assumption made by A. N. Frumkin (Ref 4) stating that the shift of the zero charge potential is directly proportional to the fraction of the surface film occupied by the metal added. There are 3 figures, 2 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION: Ural'skiy gosudarstvennyy universitet im. A. M. Gor'kogo
(Ural State University imeni A. M. Gor'kiy)

PRESENTED: April 13, 1959, by A. N. Frumkin, Academician

SUBMITTED: March 5, 1959

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KLEVTSOVA, m.p.

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1947

1992

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Figure 1

Central Publishing House, 1950, Vol. 34, p. 2.
 92-1377-9122

1277-1278

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AWARDS: Dailily good economy awarded to A. E. Car'idge,
Goodrich
(Dail Place University level A. E. Car'idge, Goodrich)

July 11, 1976

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B015/B061

5.4600

AUTHORS:

Kuznetsov, V. A. Klevtsova, M. P., Zagaynova, L. S.,
Vayntraub, L. S. Korobova, T. A. (Sverdlovsk)

TITLE:

Investigation of Contact Potential Differences Between Sn and
Sn-Te Alloys and the Electrocapillary Phenomena on Sn-Te
Alloys 21

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 6,
pp. 1345-1350

TEXT: On account of his investigations of the electrocapillary phenomena on thallium amalgams (Ref. 1), A. N. Frumkin established that the difference in the potentials between the metals in the point of zero charges is similar to the differences in the contact potentials between the same metals in a vacuum. Experimental tests of this assumption were carried out several times as by S. V. Karpachev and A. G. Stromberg (Ref. 2), O. Chaltikian and M. Proskurnin (Ref. 3), and V. A. Smirnov and L. I. Antropov (Ref. 4); few reliable results were, however, obtained. In this case the above examinations were carried out for this reason, as it was

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Investigation of Contact Potential Differences
Between Sn and Sn-Te Alloys and the Electro-
capillary Phenomena on Sn-Te Alloys

S/076/60/034/06/31/040
B015/B061

to be assumed that tellurium would be surface-active with respect to tin, and thus a large difference in contact potential between Sn and Sn-Te alloys can be detected at low tellurium concentrations. The measurements were carried out at 450°C and $\sim 10^{-5}$ torr in an apparatus (Fig. 1) similar to the one in Ref. 3, and a special ampule (Fig. 2) was used. The vacuum contained a BH-461M (VN-461M) preliminary vacuum pump, an MM-40A (MM-40A) diffusion pump, and a BI-2 (VT-2) thermocouple- and BM-3 (VI-3) ionization-vacuum gauge. Tin purified by zone melting from the Sverdlovskiy reaktivnyy zavod (Sverdlovsk Reagent Works) was used. The potential differences were determined by the method of the displacement of the diode characteristics. The diagrams obtained (Figs. 3, 4) of the differences in the contact potentials between Sn and Sn-Te alloys with 0.02 and 0.15 wt% Te show that the difference is 0.07 v or 0.15 v. The electrocapillary curves (Fig. 5) for Sn and Sn-Te alloys of the above concentration show that according to expectations, Te is surface-active with reference to Sn. The potentials of the zero charge are thus shifted to positive values, and the size of the shift is similar to the difference in the contact potentials between Sn and the above Sn-Te alloys

Card 2/3

11578

Investigation of Contact Potential Differences: S/076/60/034/06/31/040
Between Sn and Sn-Te Alloys and the Electro- B015/B061
capillary Phenomena on Sn-Te Alloys

(Table). Finally, Academician A. N. Frumkin is thanked for his advice, and the collaborator of the Institut elektrokhimii AN SSSR (Institute for Electrochemistry of the AS USSR) N. A. Shurnovskaya as well. A paper by M. V. Smirnov (Ref. 5) is referred to. There are 5 figures, 1 table, and 12 references: 11 Soviet and 1 American.

ASSOCIATION: Ural'skiy universitet im. A. M. Gor'kogo (Ural University imeni A. M. Gor'kiy)

SUBMITTED: October 10, 1958

✓

Card 3/3

L 23377-66 INT(1) JET(CZ)/000

ACC NR: AP6007851

(N)

SOURCE CODE: UR/0213/66/006/001/0082/0088

AUTHOR: Klevtsova, N. D.

ORG: Administration of gidrometeoroluzhby, Azerbaidzhan SSR (Upravleniye gidrometeoroluzhby Azerbaydzhanskoy SSR); Baku Hydrometeorological Observatory (Bakinskaya gidrometeorologicheskaya observatoriya)

TITLE: Surface currents in the Central and southern Caspian Sea in the presence of various wind fields

SOURCE: Okeanologiya, v. 6, no. 1, 1966, 82-88

TOPIC TAGS: ocean dynamics, ocean current, wind direction, wind velocity

ABSTRACT: While numerous investigations have disregarded the effect of wind on currents in the Caspian Sea, Zenin (1929-1942), Mikhaylovskiy (1931), Shtokman (1938), Lagutin (1955), and Raheplinskiy have shown conclusively that winds are the primary motivating force behind currents in the Caspian Sea. The aim of the present investigation was to determine the direction of current as a function of various wind fields. The investigation is based on a review of the data obtained from 1936 to 1963. To simplify the study, Koehinskiy's wind classification system (with respect to direction and velocity) was used and the sea area was subdivided into squares of 20' x 20'. The coefficient of stability (n), with respect to the continuity of the direction of the currents is given as:

$$n\% = \frac{V_p}{V_s} \cdot 100,$$

Card 1/2

UDC: 551.465.52/553(262.8)

L 23377-66

ACC NR: AP6007651

where V_r is the mean vector velocity and V_a is the mean arithmetic speed. The study shows that 1) there is satisfactory agreement between wind and current directions; 2) there is a steady current along the western coast of the Caspian Sea, formed under the influence of the prevailing winds and difference in density between the northern and southern sea areas; 3) the directions of currents from Derbent to the Aspheron Peninsula are difficult to define; and 4) compensating currents with directions different from those of the corresponding winds are found in the coastal area and are due to underwater and above water barriers. Orig. art. has: 1 formula, 5 tables, 2 figures.

SUB CODE: 08/

SUBM DATE: 31Oct65/

ORIG REF: 010/

OTH REF: 000

Card 2/2

SOV/70-4-4-3/34

AUTHORS: Belov, N.V. and Klevtsova, R.F.

TITLE: ~~More on~~ the Simplest Way of Developing the Fedorov
(Space) Groups

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 4, pp 473-476 (USSR)

ABSTRACT: The development of the 230 space groups by the methods outlined in Kristallografiya, 1959, Vol 4, Nr 3, still presents some difficulties in dividing the translations introduced by various symmetrical and semi-symmetrical means. Even without a diagram it is possible to allocate a star, denoting displacement from the origin, to the planes in the space group symbol (in the first instance for the orthorhombic system). This is best done by writing down each halving. For example, $Pbcn$ is expanded as $Pm+b$, $m+c$, $m+a+b$ and should be written $Pb^x c n^x$. All 16 primitive orthorhombic groups based on $Pmmm$ are listed. The method is particularly suitable also for obtaining the tetragonal groups in the standard form. The remainder of the paper is devoted to showing

Card1/2

More on the Simplest Way of Developing the Fedorov (Space) Groups ^{SOV/70-4-4-3/34}
how these can be obtained. Various modifications of the
usual notation are introduced, in particular, $\bar{4}$ is used
for the special point on the inversion axis $\bar{4}$.
There are 4 figures and 4 references, 3 of which are
Soviet and 1 English.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of
Crystallography of the Ac.Sc., USSR)

SUBMITTED: May 15, 1959

Card 2/2

3 (a)

AUTHORS:

Mamedov, Kh. S., Klevtsova, R. F.,
Belov, N. V., Academician

SOV/20-126-1-41/62

TITLE:

On the Crystalline Structure of the Tricalcium Silicate Hydrate
TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 = \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot$
 $\cdot 2\text{Ca}(\text{OH})_2$ (O kristallicheskoy strukture gidrata
trekhkal'tsiyevogo silikata TSH = $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} =$
 $\text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 = \text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 1,
pp 151-154 (USSR)

ABSTRACT:

The investigation of the cuspidine structure (Ref 1) became
an important step towards further investigations of several
Ca-silicates, above all of wollastonite and xonotlite (Ref 3).
The main peculiarity of cuspidine and of the investigated
structure of tilite (Fig 1) was, compared to the Mg(Fe)- and
Al-silicates, the rôle which the $[\text{SiO}_4]$ -tetrahedrons play in
the latter and which is played by the diorthotic groups $[\text{Si}_2\text{O}_7]$
in the Ca-silicates with respect to geometrical reasons.

Card 1/4

On the Crystalline Structure of the Tricalcium
Silicate Hydrate TSH - $.6CaO \cdot 2SiO_2 \cdot 3H_2O = Ca_6[Si_2O_7](OH)_6 =$
- $Ca_4[Si_2O_7](OH)_2 \cdot 2Ca(OH)_2$ SOV/20-126-1-41/62

The variety of the motives to which this group belongs in the Ca-silicates is considerably limited by a certain inertia of the diorthotic groups and the existence of only one direction with a dimension of 3.7 Å (height of the group) (Figs 1, 1 cursive). Thus a "tilleite band" occurs in both initially mentioned Ca-silicates as a mineralogical radical (Figs 1. 1). Figure 1 shows that a part of the tilleite band consists of 8 octahedra and two $[Si_2O_7]$ groups. The 14 O-atoms of the two last groups are, however, not sufficient to counterbalance the cation charges. This is compensated (according to Ref 5) by additional anions F, OH in the cuspidine structure. The latter consists completely of tilleite bands of a most simple formula: $Ca_8[Si_2O_7]_2(F, OH)_4 = 2Ca_4[Si_2O_7](F, OH)_2$.

The second variant of the two most simple geometrical solutions for such a formula is realized in nature. In this case the members of Ca-octahedra of a tilleite band continue one another in forming somewhat longer 4-membered members.

Card 2/4

On the Crystalline Structure of the Tricalcium
Silicate Hydrate TSH - $6\text{CaO} \cdot 28\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 -$
- $\text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$

SOV/20-126-1-41/62

It seems that the latter strengthen the structure since they lie one behind the other. In the structure of tillite itself the tillite bands are not fused, they are related to one another by additional CO_3 -groups. This demands the

introduction of an additional Ca-octahedron as well, so that the formula will be $\text{Ca}_4[\text{Si}_2\text{O}_7]\text{CO}_3 \cdot \text{CaCO}_3$ (Fig 2). In 1958

(Ref 6) new data on the hydrothermal synthesis of the substance mentioned in the title (TSH) were published and a formula suggested. If the formula of the tillite band is reduced from the formula of TSH 2 portlandite molecules $\text{Ca}(\text{OH})_2$ are obtained. It is assumed that these were replaced in the formula to the "side chain" outside the cuspidine nucleus (Table 1). They form a third layer with their 4 OH particles which links the tillite bands (with 2 layers). The additional Ca-octahedra (Fig 3) which replace the CO_3 groups in tillite are placed here as well. The authors draw the conclusion that

Card 3/4

On the Crystalline Structure of the Tricalcium
Silicate Hydrate TSH - $6\text{CaO} \cdot 2\text{SiO}_2 \cdot 3\text{H}_2\text{O} = \text{Ca}_6[\text{Si}_2\text{O}_7](\text{OH})_6 -$
- $\text{Ca}_4[\text{Si}_2\text{O}_7](\text{OH})_2 \cdot 2\text{Ca}(\text{OH})_2$ SOV/20-126-1-41/62

the TSH structure is pseudohexagonal, similarly to anhydrous tricalcium silicate. The authors of reference 5 are therefore rather wrong when they insist on a true hexagonality of TSH. This is confirmed as well by the thermogram. There are 3 figures, 1 table, and 6 references, 4 of which are Soviet.

ASSOCIATION: Institut khimii Akademii nauk AzerbSSR (Institute of Chemistry of the Academy of Sciences, Azerbaydshan SSR)
Institut kristallografi Akademii nauk SSSR (Institute of Crystallography of the Academy of Sciences, USSR)

SUBMITTED: February 26, 1959

Card 4/4

KLEVTSOVA, R.E.; BELOV, N.V.

Crystal structure of spurrite. Kristallografiia 5 no.5:689-
697 8-0 '60. (MIRA 13:10)

1. Institut kristallografii AN SSSR i Institut neorganicheskoy
khimii Sibirskogo otdeleniya AN SSSR.
(Spurrite)

YERMILOVA, L.P.; MOLEVA, V.A.; KLEVTSOVA, R.F.

"Chukhrovite," the new mineral from central Kazakhstan. Zap.
Vses. min. ob-va 89 no.1:15-25 '60. (MIRA 13:10)

1. Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii (IGEM) AN SSSR, Moskva..
(Kazakhstan--Chukhrovite)

BORISOV, S.V.; KLEVTSOVA, A.F.

Crystal structure of TR-Sr-apatite. Zhur.strukt.khim. 4 no.4:629-631
Jl-Ag '63. (MIRA 16:9)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
Novosibirsk.
(Apatite) (Strontium) (Rare earths) (Crystallography)

KLEVTSOVA, R.F.

Crystal structure of strontium apatite. Zhur.strukt.khiz.
5 no. 2118-320 Mr-Apr '64. (MIRA 17:16)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR, Novosibirsk.

ACCESSION NR: AP4044276

S/0192/64/005/004/0583/0589

AUTHOR: Klevtsov, P. V.; Klevtsova, R. F.; Sheina, L. P.

TITLE: Crystalline yttrium hydroxides

SOURCE: Zhurnal strukturnoy khimii, v. 5, no. 4, 1964, 583-589

TOPIC TAGS: yttrium hydroxide, yttrium monohydroxide, single crystal growth, hydrothermal crystal growth, ferrite crystal growth, single crystal structure

ABSTRACT: Transparent colorless crystalline phases previously observed in the products of hydrothermal synthesis of yttrium ferrite single crystals have been identified as yttrium hydroxides, $Y(OH)$ and $Y(OH)_3$. The crystal structure of these hydroxides was studied goniometrically and by x-ray diffraction, chemical analysis, and other methods. The study was considered necessary for better understanding of the phase equilibria and chemical reactions in hydrothermal systems. The $Y(OH)$ and $Y(OH)_3$ single crystals used in the study were synthesized in hydrothermal conditions from either Y_2O_3 - Fe_2O_3 - H_2O - $NaOH$ or Y_2O_3 - H_2O - $NaOH$ system. Most of the $Y(OH)$ single crystals were in the form

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ACCESSION NR: AP4044276

of hexagonal plates belonging to the prismatic class of the monoclinic crystal system and to the $P2_1/m$ space group. Typical $Y(OH)_3$ single crystals were needle-shaped, 1 cm x 0.6 mm, belonging to the hexagonal system and to the $P6_3/m$ space group. Dimensions of the unit cell were determined for both hydroxides. The piezoelectric effect was not detected in freshly prepared $YOOH$ or $Y(OH)_3$ crystals. The x-ray diffraction patterns of $Y(OH)_3$ crystals were found to be similar to those of $M(OH)_3$, where M is La, Nd, Sm, Gd, or Er. It was concluded that only two crystalline phases— $Y(OH)_3$ and $YOOH$ —are formed, individually or simultaneously, in the $Y_2O_3-H_2O-NaOH$ system below 600°C. Orig. art. has: 2 figures and 3 tables.

ASSOCIATION: Institut neorganicheskoy khimii SO AN SSSR, Novosibirsk
(Institute of Inorganic Chemistry, SO AN SSSR)

SUBMITTED: 11Jul63

ENCL: 00

SUB CODE: 88, IC

NO REF SOV: 004

OTHER: 006

Card 2/2

L 26050-65 EWT(m)/T/EMP(t)/EMP(b) IJP(c) JD/JG

ACCESSION NR AP5001708

S/0192/54/005/006/0860/0863

AUTHOR: Klevtsova, R. F.; Klevtsov, P. V.

TITLE: Investigation of the crystal structure of YOOH

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 6, 1964, 860-863

TOPIC TAGS: YOOH, Y(OH)₃, crystal structure, IR spectra, x ray analysis

ABSTRACT: An x-ray study was made of the crystal structure of the monohydroxide YOOH and of the trihydroxide Y(OH)₃. The former belongs to the spatial group P2₁/m, the trihydroxide-P6₃/m. YOOH can be obtained from Y(OH)₃ by heating under hydrothermal conditions. The crystal structure of the two compounds is comparable--in both structures all atoms are spaced analogously. Their IR spectra were studied. The calculated Y-OH interatomic distance, 2.31 Å, was an indirect indication of the existence of hydrogen bonding in YOOH. The three hydroxide groups in Y(OH)₃ are not crystallochemically equivalent. The authors thank G. N. Kustov for taking the infrared spectra. Orig. art. has 6 figures and

Card 1/2

L 26050-65

ACCESSION NR: AP5001708

1 table

ASSOCIATION: Institut neorganicheskoy khimii 80 AN SSSR Novosibirsk (Institute
of Inorganic Chemistry, 80 AN SSSR)

SUBMITTED: 03Jan64

ENCL 00

SUB CODE: IC, GC

NR REF 500 004

OTHER 004

BORISOV, S.V.; BRUSENTSEV, F.A.; KLEVTSOVA, R.F.; BELOV, N.V., akademik

Crystal structure of oreedite $\text{Ca}_3\text{Al}_2(\text{P},\text{OH})_{10}\text{SO}_4 \cdot 2\text{H}_2\text{O}$. Dokl.
AN SSSR 155 no. 5:1082-1084 Ap '62. (MIRA 17:5)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN
SSSR.

BORISOV, S.V.; KLEVTSOVA, R.P.; BELOV, N.V., akademik

Crystalline texture of "uklonskovite" $\text{NaMg}(\text{SO}_4)(\text{OH}) \cdot 2\text{H}_2\text{O}$
Dokl. AN SSSR 158 no.1:116-118 S-O '64 (MIRA 17:8)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya
AN SSSR.

KLEVTSOV, P.V.; KLEVTSOVA, R.F.; KEFELI, L.M.; PLYASOVA, L.M.

Forms of growth and symmetry of iron molybdate $\text{Fe}_2(\text{MoO}_4)_3$
crystals. Izv. AN SSSR. Neorg. mat. 1 no.6:918-923 J8 '65.
(MIRA 18:8)

1. Institut neorganicheskoy khimii i Institut kataliza
Sibirskogo otdeleniya AN SSSR.

LE 600-45 EEC(b)-2/ENT(1)/ENT(m)/ENP(b)/T/ENP(t) P1-4 TUP(c) GG/JD/JG
 ACCESSION NR AP6016921 UR/0192/65 006/003/0469/0471
 548.736

AUTHOR: Klevtsov, P. V.; Klevtsova, R. F.; Sheina, L. P.

TITLE: Crystalline yttrium hydroxychloride

SOURCE: Zhurnal strukturnoy khimii, v. 6, no. 3, 1965, 469-471

TOPIC TAGS: yttrium compound, yttrium hydroxychloride, crystal structure

ABSTRACT The chemical composition of crystalline yttrium hydroxychloride was determined. Chemical analysis gave the following results (in wt. %): Y^{3+} , 54.8; Cl^{-} , 22.0; $H_2O + HCl$, 31.3. Infrared spectra showed the absence of water of crystallization and the presence of hydroxyl groups. The results of the chemical analysis led to the formula $Y(OH)_2Cl$, which was confirmed by an x-ray structural study. The compound belongs to the rhombic system; its Laue class is $D_{2h} - mmm$, the unit cell parameters are: $a = 6.21 \pm 0.04$ Å, $b = 12.54 \pm 0.06$ Å, $c = 3.62 \pm 0.02$ Å. The average density of the crystals measured by the flotation method is 3.71 g/cm^3 , hence, the unit cell contains four formula units $Y(OH)_2Cl$ (the x-ray density is 3.73 g/cm^3). X-ray powder diagrams of the $Y(OH)_2Cl$ crystals were also studied. Orig. art. has: 1 table.

Card 1/2

L 63620-65

ACCESSION NR: AP6016921

ASSOCIATION: Institut neorganicheskoy khimii SO AN SSSR, Novosibirsk (Institute of
Inorganic Chemistry, SO AN SSSR)

SUBMITTED: 04Apr64

ENCL: 00

SUB CODE: SS, CC

NO REF SOV: 006

OTHER: 000

Card ^K
2/2

KLEVTSOVA, R.F., KLEVTSOV, P.V.

Shapes of crystal growth and crystalline structure of $\text{YCl}(\text{OH})_2$.
Dokl. AN SSSR 162 no.5:1049-1052. Je '65. (MIRA 18:7)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR.
Submitted December 19, 1964.

BRISMITSEV, F.A.; BORISOV, S.V.; KLEVTSOVA, D.F.

Defining more accurately the crystalline structure of oreedite
 $\text{Ca}_3\text{Al}_2(\text{F},\text{OH})_{10}\text{SO}_4 \cdot 2\text{H}_2\text{O}$. Zhur. strukt. khim. 6 no. 4:567-570

Jl-Ag '65

(MIRA 19:1)

1. Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR,
g. Novosibirsk. Submitted June 22, 1964.

KLEVISOVA, T. V.

"Experimental Investigations of the Characteristics of Ultrasound Propagation in Binary Mixtures."

Report presented at the 6th Sci. Conference on the Application of Ultrasound in the investigation of Matter, 3-7 Feb 1958, organized by Min. of Education RSFSR and Moscow Oblast Pedagogic Inst. im. N. K. Krupekaya.

L 54829-65 EPP(c)/EWT(m)/EWP(j)/T Pr-L/Pc-4 RM

ACCESSION NR: AP5014945

UR/0065/65/000/006/0005/0010
66.092.14:542.973

AUTHORS: Klevtsova, V. P.; Rapoport, I. B.; Vselyubskiy, S. B.

TITLE: Synthesis of hydrocarbons with oxygen-containing compounds from CO and H₂
above the iron-copper catalysts

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 6, 1965, 5-10

TOPIC TAGS: hydrocarbon, hydrocarbon conversion, synthetic hydrocarbon, synthesis property, oxygen compound, hydrogen, catalysis, catalyst carrier, catalytic activity/VTI gas testing device, TsIATIM 51 gas testing device

ABSTRACT: Precipitation of Fe-Cu catalysts (with a high content of metallic iron) and their behavior during the synthesis of products from CO + H₂ were studied to determine the role of the metallic iron in the high volumetric rate synthesis. The catalyst precipitates were reduced at 450C until their content of metallic iron was 94-99%. They were tested in a continuous flow device with and without residual gas circulation. Temperature, pressure, the fresh gas consumption, and the quantity of waste gas were measured at definite time intervals. Residual gas and the propane-butane fraction were analysed in the VTI and the TsIATIM-51 gas

Cord 1/4

L 54829-65

ACCESSION NR: AP5014945

testing devices. Different distillates were obtained from the liquid products and were analyzed for their content of alcohols, acids, esters, carbonyl, and unsaturated compounds. Variation in the catalytic activity of a Fe-Cu-Mn-potash agent was observed with the change in the amounts of its components. Best results were obtained with 100Fe : 20Cu : 4Mn : 0.75K₂O, producing 92 g/m³ CO + H₂ of liquid and 45 g/m³ CO + H₂ of gaseous hydrocarbons at 295°C and 87% Co transformation. At 5% Cu the production of liquid hydrocarbons dropped to 61 g/m³; at 1.2% K₂O the CO transformation dropped to 52% and the yield of liquid hydrocarbons to 35%. The effect of the catalyst reduction temperature on its activity is shown graphically in Fig. 1 on the Enclosure, that of the reduction time on the yield of the synthetic product in Fig. 2. With the increase in the reduction temperature from 450 to 800°C, the specific surface of the catalyst decreased from 30 to 5 m²/g because of pore fusion. This decrease in the adsorptive properties resulted in the formation of mostly gaseous hydrocarbons, reducing drastically the production of liquid ones. Orig. art. has: 5 tables and 3 figures.

ASSOCIATION: VNII NE

SUBMITTED: 00

ENCL: 02

SUB CODE: 00

NO REF SOV: 008

OTHER: 006

Card 2/4

KLEVTSOVA, Z., 1msh.

Intallation for conveying milling products by means of aerosol at
the Alma-Ata Grain Milling Combine. Muk-elev. prom. 27 no.6:14-15
Je '61. (MIRA 14:6)

1. Ministerstvo zagotovok Kazakhskoy SSR.
(Alma-Ata—Flour mills—Equipment and supplies)
(Pneumatic-tube transportation)

L 15752-66 DT(a)/1/DT(b)/DT(b) 1P(b) JD/09

ACC NR: AT5027957

SOURCE CODE: UR/0000/65/000/000/0216/0218

AUTHOR: Corbunov, N. S. (Doctor of chemical sciences); Latukhova, A. G.; Klevtsur, S. A.; Pavlova, V. A.

ORG: none

TITLE: Diffusion of silicon coatings on copper 1

SOURCE: Seminar po zharostoykim pokrytiyam. Leningrad, 1964. Zharostoykiye pokrytiya (Heat-resistant coatings); trudy seminar. Leningrad, Izd-vo Nauka, 1965, 216-218

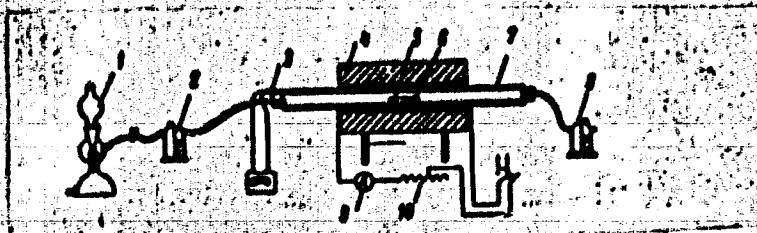
TOPIC TAGS: electrolyte, copper, silicon, internal stress, crystal lattice structure

ABSTRACT: Electrolytically applied coatings on copper suffered large internal stresses during abrupt variations of temperature. This resulted in the cracking and peeling off of the coatings. Experiments on the diffusion coating of copper disk samples were made in the flow of dried hydrogen in an apparatus (see fig.) consisting of a Kipp generator 1 for the production of H by the reaction of

1/2

L 15752-66

ACC NR: AT5027957



metallic zinc with H_2SO_4 ; Tishchenko flasks 2 and 8, containing H_2SO_4 ; a Pt-PtRh thermocouple 3 with a galvanometer; a tubular electric resistance furnace 4; a container 5 with samples 6; a metallic tube 7; an amperometer 9; and a rheostat 10. Ground ferrosilicide with an addition of 1-5% ammonium chloride was used for coating the copper samples. The silicon coatings obtained were dense, had a silver mat surface, and their thickness depended on the time and temperature of coating (~ 200 and 400μ after coating for 4 hr at $700^\circ C$ and $750^\circ C$, respectively). An X-ray diffraction study showed that the diffusion layer consisted entirely of the Cu_2Si phase, having a cubic structure with a lattice parameter of $a = 6.30 \text{ \AA}$. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,20/ SUBM DATE: 20Jul65/ NR REF SOV: 000/ OTHER: 000
2/2 SYN

BORISENKO, A.I., doktor tekhn. nauk, otv. red.; TOROPOV, N.A., red.; IVANOV, V.Ye., red.; APPEN, A.A., doktor khim. nauk, red.; GORBUNOV, N.S., doktor khim. nauk, red.; KLEYTSUR, B.A., doktor tekhn. nauk, red.; NECHIPORENKO, Ye.P., doktor tekhn. nauk, red.

[Heat-resistant coatings; transactions] Zharostoikiye pokrytiia; trudy. Leningrad, Nauka, 1965. 233 p.

(MIRA 18:9)

1. Seminar po zharostoykim pokryt'iyam, Leningrad, 1964.
2. Chlen-korrespondent AN SSSR (for Toropov, Ivanov).

BOYARSKIY, M.M.; KLIMYADO, A.M., преподаvatel' istorii partii; LANDO, M.N.;
MOLOTKOV, L.D.; POPOVA, I.V., istorik; TKACHENKO, P.M.; POCHEBUT,
G.A., kand.istor.nauk, starshiy nauchnyy sotrudnik, nauchnyy red.;
ROZANOV, M.D., red.; TIKHONOVA, I.N., tekhn.red.

[Resources for electrification; brief description of the history
of the Leningrad "Electric power" Plant named in honor of S.M.
Kirov] Arsenal elektrifikatsii; kratkii ocherk istorii leningrad-
skogo zavoda "Elektrosila" imeni S.M.Kirova. Leningrad, Lenisdat,
1960. 267 p.
(MIRA 13:7)

1. Zamestitel' direktora zavoda "Elektrosila" (for Boyarskiy).
2. Nachal'nik byuro tekhnicheskoy informatsii zavoda "Elektrosila"
(for Lando). 3. Redaktor zavodskoy gazety "Elektrosila" leningrad-
skogo zavoda "Elektrosila" (for Molotkov). 4. Tekhnicheskii muzey
zavoda "Elektrosila" (for Popova). 5. Zaveduyushchiy kabinetom
politicheskogo prosveshcheniya partkoma zavoda "Elektrosila" (for
Tkachenko). 6. Institut istorii partii pri Leningradskom obkome
Kommunisticheskoy partii Sovetskogo Soyusa (for Pochebut).
(Leningrad--Electric power plants)

KLEWENHAGEN, J.

KLEWENHAGEN, J. Prevention of harmful coupling in receivers. p. 29.
Vol. 6, no. 1, Jan. 1956
RADIOAMATOR. Warszawa Poland

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 April 1957

POLAND

Wojciech GIELWANOWSKI and Stanislaw KLEWENHAGEN, First Gynecology and Obstetric Clinic, College of Medicine (I KLINIKA Półożnictwa i Chorob Kobiectych AM) Head Prof Dr W. MICHALKIEWICZ; and Department of Medical Radiology (Zaklad Radiologii Lekarskiej AM) Head Prof Dr B. GLADYSZ, Poznan.

"Diagnostic X-Ray Examination and Early Pregnancy."

Warsaw, Polaki Tygodnik Lekarski, Vol 17, No 46, 12 Nov 1962; pp 1785-1789.

Abstract [English summary modified]: Studies in 15 women and in dummies revealed that the dose received by the pregnant uterus and the gonads during any radiologic diagnostic tests in early pregnancy was inadmissible. Details of apparatus and technique are outlined to minimize the damage or eliminate it. Three tables, 2 graphs, 2 Polish and about 30 Western references.

1/1

KLEWENHAOEN, Stanislaw; NALEWAJSKI, Wieslaw

Automatic syringe -- a device for rapid injection of contrast medium. Pol. przegl. radiol. 28 no.6:613-618 N-D '64.

1. Z Zakladu Radiologii Akademii Medycznej w Poznaniu (Kierownik: prof. dr. med. B. Gladysz) i Katedry Obrabiatel Politechniki Poznanskiej (Kierownik: doc. inz. M. Tutak).

GIELWANOWSKI, Wojciech; KLEWENHAGEN, Stanislaw

Diagnostic radiological examination and early pregnancy. Pol. tyg.
lek. 17 no.46:1785-1789 12 N '62.

1. Z I Kliniki Położnictwa i Chorob Kobietych AM w Poznaniu; kierownik:
prof. dr med. W. Michalkiewicz i z Zakładu Radiologii Lekarskiej AM w
Poznaniu; kierownik: prof. dr med. B. Gładysz.
(PREGNANCY) (RADIOGRAPHY)

KLEWENHAGEN, Stanislaw

Characteristic properties of antiscattering grids and criteria
for their use. Pol. przegl. radiol. 29 no.1:91-100 Ja-V'65.

1. Z Zakladu Radiologii Lekarskiej Akademii Medycznej w
Poznaniu (Kierownik: prof. dr. med. B. Gladysz).

KLEWENHAGEN, Stefan, ins.

Modernisation of the cable railway to Kasprowy Wierch. Przegl mech
20 no.24:740-743 '61.

1. Pracownia Transportu Linowego, Zakopane.

(Poland—Railroads, Cable)

S/270/63/000/001/007/024
A001/A101

AUTHOR: Klewin, P.

TITLE: An investigation of the adequacy of a multi-line cross-wire for measuring horizontal angles

PERIODICAL: Referativnyy zhurnal, Geodeziya, no. 1, 1963, 29, abstract 1.52.200 ("Vermessungstechnik", 1962, v. 10, no. 7, 194 - 195, German)

TEXT: The author presents and compares the results of measuring horizontal angles carried out by means of a Theo 010 theodolite with a cross-wire consisting of five vertical wires (separation between the wires is 250^{mm}) and that with a cross-wire having one vertical wire. Angular measurements were conducted by different methods and at distances to targets being 1.5 - 5 km. It is concluded that using five wires for observations yields no gain either in time or in the accuracy of measurement results. It takes 58 min to measure five directions by two observations aiming at the target with each of the five wires, whereas the measurement of five directions by five observations and aiming at the target with one wire takes 46 min. The influence of errors in circle divi-

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An investigation of the...

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sions upon the result in the first case is considerably higher than in the second case. It is proposed to investigate the accuracy of measuring horizontal angles with the Theo 010 theodolite with a cross-wire of three vertical wires separated by not less than 10^8 . It is noted that the use by V. P. Kozlov (RZhAstr, 1958, no. 6, 4127) of a cross-wire with three vertical bisectors yielded satisfactory results.

K. Shingareva

[Abstracter's note: Complete translation]

Card 2/2

KLEWSKI, A.; WAHN, J.

Conditions of separating traces of barium from biological material.
p. 225.

CHEMIA ANALITYCZNA. (Komisja Analityczna Polskiej Akademii Nauk i Naczelna
Organizacja Techniczna) Warszawa. Poland. Vol. 4, no. 1, 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 8, August 1959
Uncle.

KLEJBEK, Aleksandra; KASZYK-STAYCHARSKA, Maria

Determination of small amounts of zinc and calcium in biological material. Acta Pol. pharm. 20 no.6:433-440 '62.

Instytut Ekspertyz Sadowych w Krakowie (dyrektor: prof. dr J. Lehn).

KLEWSKI, J.

Ignition as a result of static electricity. p. 26. (Ochrona Pracy; Bezpie-
czenstwo i Higiena Pracy. Vol. 10, No. 5, May 1956, Warsaw, Poland)

SO: Monthly List of East European Accessions (FEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

KLEWZYC, Lech, mgr

Balance of materilas, iron and production of blast furnaces.
Hutnik P 30 no. 4: 120-125 Ap '63.

KIEWZYC, Lech, mgr

Conference on economic problems in the Lenin Ironworks.
Wlad hut 19 no.1:34 Ja '63.

KLEWZIC, Lech, mgr

Tenth anniversary of activity of the blast furnace department of
the Lenin Steel Works. Wind hut 15 no.9:293-294 S '64.

L 1568-66 EWT(m)/EWP(v)/EWA(d)/EWP(v)/I/EWP(c)/EWP(k)/EWP(z)/EWP(l)/EWA(c)/ETC(m)
 IJP(g) MJW/JD/MW/HW/JQ/EM
 ACCESSION NR: AP3014901

UR/0135/65/000/006/0042/0043
 669.15-194:624.014.23:006.3

AUTHOR: Kleybanova, Zh. P. (Engineer)

TITLE: Scientific-Engineering Conference on Austenitic Boron-Bearing Steels for Welded Structures

SOURCE: Svarochnoye proizvodstvo, no. 6, 1964, 42-43

TOPIC TAGS: austenitic steel, boron steel, metal welding, metallurgic conference

ABSTRACT: A scientific-engineering conference on the use of boron-bearing austenitic steels in welded structures was held in Moscow 10-11 March 1965 under the sponsorship of the State Committee for heavy, power, and transport machine building at Gosplan SSSR, the Coordination Council on Welding at the Electric Welding Institute im. Ye. O. Paton (IES), and the Central Scientific Research Institute of Technology and Machine Building (TsNITMASH).

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K. V. Lyubavskiy^{4.55} in his opening statement emphasized the necessity of developing new weldable heat-resistant materials for power units operating under conditions of high and ultrahigh temperatures and pressures. ^{4.55}Austenitic steels containing boron in amounts over 0.2% are a promising type of such materials.

The remaining reports dealt with the development, melting, hot working, and welding of austenitic steels containing up to 2.0% boron. The conclusions of most of the reports were rather pessimistic.

B. I. Medovar^{4.55}, N. I. Pinchuk^{4.55}, and L. V. Chkotilo^{12.55} (IES) reported on EP380^{4.55} (Kh15N15M2BR1), EP381 (Kh18N12BR1), EP531 (Kh18N12B2R1), and EP487 (Kh15N25V5T2RT)^{4.55} steels. All four possess satisfactory mechanical properties and heat resistance, high ductility in stress-rupture tests and are not susceptible to hot cracking in the weld-adjacent zone. The welds, however, have a low impact strength, 2-3 mkg/cm², and are susceptible to cold cracking; heavy sections 30-50 mm thick cannot be welded without preheating to 150-200C.

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Similar results were obtained at the Central Scientific Research Institute of Ferrous Metallurgy by K. A. Lanskaya with EP400 chromium-nickel-tungsten-mobium steel containing 0.4—0.6% boron, and by A. V. Russiyan and T. S. Kireyeva with Kh13N13V2B steel containing 0.05—0.5% boron. Boron at contents over 0.2% reduces the susceptibility to hot cracking, increases structural stability, and improves the ductility in stress-rupture tests. However, it lowers the ductility of the base and weld metal, increases susceptibility to cold cracking, and at contents of 0.4—0.6% lowers the high-temperature plasticity and the resistance to high-temperature deformation.

44.55 15 6
M. M. Novokreshchenov discussed the weldability of Kh18N10 and Kh17 steels alloyed with boron. The room temperature impact strength of welds varied from 2.0 to 3.7 mkg/cm² and the bend angle from 20 to 45°. All specimens failed in the heat-affected zone.

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44.55 22
R. B. Polyakova (All-Union Institute for the Design and Planning of Electric Power Projects) reported on field welding of EP467 steel plates 23-25 and 50 mm thick. Preheating to 200C helped to prevent cold cracking of welds in plates 25 mm thick, but attempts to weld 50-mm thick plates failed. The impact strength of the weld did not exceed 2-3 mkg/cm², compared to 7 mkg/cm² required by specifications.

44.55 44.55
Yu. K. Vorob'yev (Elektrostal' Metallurgical Plant) discussed the experience at the plant in melting and hot working chromium-nickel austenitic steels with a boron content up to 2%. He noted certain difficulties in hot working because of the low plasticity of the metal and the narrow hot-working range.

44.55 44.55
Ye. M. Kontsevaya (Serp i Molot Plant in Moscow) reported on the production of wire, narrow strip, and sheet from 16 boron-bearing steels. She also noted difficulties stemming from the low plasticity of these steels.

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R. P. Zaletayev and S. N. Minkina (TsNIITMASH) reported on TsZh-16 cast, experimental nickel-base alloy for gas turbine blades, which contains 0.5% boron. The alloy has satisfactory mechanical properties (except for the impact strength, 0.9—1.3 mkg/cm² either at room or at high temperatures), a respective rupture strength at 750 and 800C of 14 and 12 kg/mm², high ductility at these temperatures, and a satisfactory structural stability in the aged condition.

In the final resolution the conference emphasized the necessity of further study of boron-bearing austenitic steels and recommended testing some of the developed alloys under operational conditions.

"One "T" in this designation, probably the second, is a misprint. Most probably it should be "1," as in the other designations.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MM, IE

NR REF SOV: 000

OTHER: 000

ATD Press: 4082-F

Card 3/3

KLEYBER, V.G.

42576. O Dnoglubitel'nykh Rabotakh Na Perekatak. O Plane Zemlecherpat. Rabot Na Volge Mezhdru Rybinskom I Ust'om Kamy. Voprosy Oidrotekhniki Svobodnykh Rak. Sbornik Izbr. Trudov Osnovopoleshnikov Ras. Ruslovy Oidrotekhniki. M, 1948, S 302-26.

HAYMAN, I.M.; KILYBS, B.D.

Experience in the prevention of eye injuries in the metalworking industry. Vest.oft. 69 no.5:26-32 8-0 '56. (MLRA 9:12)

1. Is Moskovskogo instituta okhrany truda Vsesoyuznogo Tsentral'nogo Soveta professional'nykh soyuzov i Nauchno-issledovatel'skogo instituta glasnykh bolezney imeni Gel'mgol'tsa (dir. - kandidat meditsinskikh nauk A.V.Roslavtsev)

(EYE, wounds and injuries
prev. in metal-working indust.)

(INDUSTRIAL HYGIENE
prev. of eye inj. in metal-working indust.)

KLEYBS, B.D., kand.med.nauk

Safety goggles. Zdorov's 7 no.7:20 J1 '61.
(SAFETY GOGGLES)

(MIRA 14:6)

ROSLAVTSEV, A.V.; URMANKHEE, L.S.; LEVINA, A.I.; KLEYES, B.D.

Government standards for protective goggles. Med. prom. 16
no.6:23-26 F '62. (MIRA 15:3)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut
glasnykh boleasny imeni Gel'mgol'tsa.
(SAFETY GOOGLES)

KLEYBS, Boris Davydovich; RABINOVICH, M.G., red.; BALDINA, N.F.,
tekh. red.

[Protect your eyes in industry] Beregite glaz na proizvod-
stva. Moskva, Gos. izd-vo med. lit-ry Medgiz, 1960. 29 p.
(MIRA 14:5)
(EYE--PROTECTION) (EYE--WOUNDS AND INJURIES)

KLNYBS, D., vrach.

~~_____~~ Eyes and colors. IUn. tekhn. 2 no.2:46-48 F '58.
(Color sense)

(MIRA 11:2)

BC

A-1

C.

Indicator electrodes made of mixtures of electrochemically conducting salts. E. M. Shwarts and G. A. Kiselev (Sov. Inst. Chem. USSR, Akad. Wiss., 1968, 7, 262-264; and J. Gen. Chem. USSR, 1968, 28, 1615-1620).—Mixtures were prepared by closing an end of a glass tube with a molten and sealed mixture of AgI with AgBr or Ag₂S; the salt mixture was fused to the glass with platinum. The tube was filled with a KCl or AgNO₃ solution, and a Ag|AgCl electrode inserted. The resistance of AgI-AgBr and AgI-Ag₂S mixtures is so small that the e.m.f. of the cell Ag|AgCl, KCl or AgNO₃|salt mixture||Ag solution|saturated Hg₂Cl₂ electrode can be determined using a galvanometer as the null-point detector. The arrangement was tested for the titration of AgNO₃ with KBr, KI, or KSCN, for the titration of KI with AgNO₃, etc. Mixtures of 1 part of AgI and 1 part of AgBr, and of 9 parts of AgI and 1 part of Ag₂S are recommended. J. J. M.

KLEYBS, G. A.

"Indicator Electrodes from Alloys of Electrolytically Conducting Salts," Zhur. Obshch. Khim., 10, No 17, 1940. Lab of Inorganic and Analytic Chem., Kiev Agricultural Inst. Received 22 April 1940. p. 1612

Report U-1610, 3 Jan 1952.

